Amendments to the Claims:

This listing of the claims will replace all prior versions, and listings, of claims in the application:

Listing of the Claims:

I Claim:

1. (currently amended) A self-condensing sensor assembly for monitoring pH:

An outer tubular member;

an inner tubular member, said outer tubular member co-linearly enclosing an inner tubular member;

an antimony sensor enclosed within said inner tubular member;

a reference element enclosed within said outer tubular member and located in a proximal position to said antimony sensor;

a wick material, said wick material having one side which partially surrounds and substantially engages a portion of said inner tubular member, said wick material extending from said antimony sensor to a proximal position whereby said wick material is substantially engaged to said reference element;

an ion conduction media entrained or retained within said wick material; and

said self-condensing sensor having the capability to condense a patient's breath across said antimony sensor and said reference element.

2. (currently amended) The sensor as recited in claim 1, wherein said wick material is selected from the group consisting of fibrous polymeric meshes of polyester, polyimide, polyethylene, polypropylene, polyvinyl chloride, polystyrene, ABS, nylon, ~~delrin,~~ acetal, or polyethylene terephthalate (PET), polytetrafluoroethylene (PTFE) or any combinations thereof.

3. (currently amended) The sensor as recited in claim 1, wherein said wick is a porous material selected from the group consisting of porous ceramic, metallic or polymeric materials.

4. (previously presented) The sensor as recited in claim 1, wherein said ion conduction media contains a polysaccharide based material.

5. (previously presented) The sensor as recited in claim 1, wherein said ion conduction media comprises an electrolyte/water base gel.

6. (previously presented) The sensor as recited in claim 1, wherein said ion conduction media comprises a conductive polymer.

7. (previously presented) The sensor as recited in claim 1, wherein said reference element comprises silver chloride.

8. (previously presented) The sensor as recited in claim 1, wherein said reference element comprises a silver element having a silver chloride coating.

9. (previously presented) The sensor as recited in claim 1, wherein said co-linear configuration between said outer tubular member and said inner tubular member are offset.

10. (previously presented) The sensor as recited in claim 1, further comprising an electrical and display means which is in communication with the sensor and processes information obtained from said sensor for presenting a pH reading.

11. (currently amended) A self-condensing sensor assembly for monitoring pH:

an outer tubular member;

an inner tubular member, said outer tubular member coaxially enclosing an inner tubular member;

an antimony sensor enclosed within said inner tubular member and substantially engaged to said inner surface of said inner tubular member, said antimony sensor including an electrical communication which extends to a proximal terminal position;

a reference element enclosed within said outer tubular member and located proximal to said antimony sensor, said reference sensor element includes an electrical communication means which extends to the proximal terminal position;

a wick material, said wick material having one side which partially surrounds and substantially engages a portion of said inner tubular member, said wick material extending from said antimony sensor to a proximal position whereby said wick material is substantially engaged to said reference element;

an ion conduction media is entrained or retained within said wick material; and

said self-condensing sensor having the capability to condense a patient's breath across said antimony sensor and said reference element.

12. (previously presented) The sensor as recited in claim 9, wherein said wick material is selected from the group consisting of fibrous polymeric meshes of polyester, polyimide, polyethylene, polypropylene, polyvinyl chloride, polystyrene, ABS, nylon, delrin, or polyethylene terephthalate, (PET) polytetrafluoroethylene (PTFE) or any combinations thereof.

13. (previously presented) The sensor as recited in claim 11, wherein said ion conduction media contains a polysaccharide based material.

14. (previously presented) The sensor as recited in claim 11, wherein said ion conduction fluid comprises an electrolyte/water base gel.

15. (previously presented) The sensor as recited in claim 11, wherein said reference element comprises silver chloride.

16. (previously presented)The sensor as recited in claim 11, wherein said reference element comprises a silver element having a silver chloride coating.

17. (previously presented) The sensor as recited in claim 11, wherein said co-linear configuration between said outer tubular member and said inner tubular member are offset.

18. (previously presented) The sensor as recited in claim 11, further comprising an electrical connector on the proximal end of said sensor, said electrical connector is connected to said electrical communication with the antimony sensor and the reference element.

19. (previously presented) The sensor as recited in claim 11, further comprising a display means which is in electrical communication with the Antimony electrical communication and the reference element electrical communication; said display may further processes information obtained from said sensor for presenting pH data in digital or in an analog format.

20. (previously presented) The system as recited in claim 11, wherein said electrical communication is accomplished by a plurality of wires.

21. (previously presented) The system as recited in claim 11, wherein said electrical communication is accomplished by a wireless means.

22. (currently amended) A self-condensing sensor assembly for monitoring pH:

an outer tubular member;

an inner tubular member, said outer tubular member coaxially enclosing an inner tubular member;

an antimony sensor enclosed within said inner tubular member;

a reference element enclosed within said outer tubular member and located in a proximal position to said antimony sensor;

a wick material, said wick material having one side which partially surrounds and substantially engages a portion of said inner tubular member, said wick material extending from said antimony sensor to a proximal position whereby said wick material is substantially engaged to said reference element;

an ion conduction media entrained or retained within said wick material; and

said self condensing sensor having the capability to condense vapor across the sensing elements.

23. (previously presented) A self-condensing sensor assembly for monitoring pH:

an outer tubular member;

an inner tubular member, said outer tubular member co-linearly or coaxially enclosing an inner tubular member;

an antimony sensor enclosed within said inner tubular member;

a reference element enclosed within said outer tubular member and located in a proximal position to said antimony sensor;

a wick material, said wick material having one side which partially surrounds and substantially engages a portion of said inner tubular member, said wick material extending from said antimony sensor to a proximal position whereby said wick material is substantially engaged to said reference element;

an ion conduction media entrained or retained within said wick material,

said wick material and said antimony sensor are positioned in close proximity at a terminal end of said outer tubular member, and

said sensor assembly being of a small mass and capable of rapidly changing temperature such that it functions to cool below the dew point and subsequently condenses humid gases in close proximity to said sensor to form a liquid across the sensing elements on said terminal end.

24. (currently amended) A self-condensing sensor assembly for monitoring pH:

an outer tubular member;

an inner tubular member, said outer tubular member coaxially enclosing an inner tubular member;

an antimony sensor enclosed within said outer tubular member and substantially engaged to said outer surface of said inner

tubular member, said antimony sensor including an electrical communication which extends to a proximal terminal position;

a reference element enclosed within said inner tubular member and located proximal to said antimony sensor, said reference sensor element including an electrical communication which extends to the proximal terminal position;

a wick material, said wick material substantially enclosed within said inner tubular member, said wick material extending from said antimony sensor to a proximal position whereby said wick material is substantially engaged to said reference element;

an ion conduction media is entrained or retained within said wick material; and

said self condensing sensor having the capability to self-condense.

25. (previously presented) The system as recited in claim 1, further comprising a coating on a portion of said self-condensing sensor, said coating consisting of hydrophilic polyurethanes, polyacrylamides, poly(2-hydrox-ethyl-methacrylate), other methacrylate copolymers, perfluorinated polymers, polysaccharides, polyvinylchloride, polyvinyl alcohol, silicones and any combinations thereof.

26. (previously presented) The system as recited in claim 11, further comprising a coating on a portion of said self-condensing sensor, said coating consisting of hydrophilic polyurethanes, polyacrylamides, poly(2-hydrox-ethyl-

methacrylate), other methacrylate copolymers, perfluorinated polymers, polysaccharides, polyvinylchloride, polyvinyl alcohol, silicones and any combinations thereof.

27. (previously presented) The system as recited in claim 22, further comprising a coating on a portion of said self-condensing sensor, said coating consisting of hydrophilic polyurethanes, polyacrylamides, poly(2-hydrox-ethyl-methacrylate), other methacrylate copolymers, perfluorinated polymers, polysaccharides, polyvinylchloride, polyvinyl alcohol, silicones and any combinations thereof.

28. (previously presented) The system as recited in claim 23, further comprising a coating on a portion of said self-condensing sensor, said coating consisting of hydrophilic polyurethanes, polyacrylamides, poly(2-hydrox-ethyl-methacrylate), other methacrylate copolymers, perfluorinated polymers, polysaccharides, polyvinylchloride, polyvinyl alcohol, silicones and any combinations thereof.

29. (previously presented) The system as recited in claim 24, further comprising a coating on a portion of said self-condensing sensor, said coating consisting of hydrophilic polyurethanes, polyacrylamides, poly(2-hydrox-ethyl-methacrylate), other methacrylate copolymers, perfluorinated polymers, polysaccharides, polyvinylchloride, polyvinyl alcohol, silicones and any combinations thereof.